

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A method for transmitting frames using between switches
in a fibre channel switch network, comprising:

5 determining ~~a frame's~~ priority for a plurality of frames based on a hop count for
~~the each frame, where a frame with a lesser hop count has a higher priority than a frame~~
with a greater hop count;

placing ~~a frame~~ the frames in a plurality of priority ~~queue~~ queues, where the each
priority queue is dedicated to frames having similar priorities; and

10 selecting ~~a frame~~ frames for transmission based on ~~the each~~ frame's priority, ~~if~~
~~credit is available, where a frame with a higher priority is sent before a frame with a~~
~~lower priority; and~~

~~selecting a frame with a lower priority if enough higher priority frames have been~~
~~sent~~

15 ~~wherein higher priority frames are selected before lower priority frames until a~~
~~threshold number of higher priority frames have been selected, after which at least one~~
~~lower priority frame is selected if lower priority frames are pending.~~

2. (Currently Amended) The method of Claim 1, where a counter in each priority
queue maintains a count of frames ~~that are transmitted~~ selected from ~~a priority~~ that queue, and is
20 ~~used to send lower priority frames if enough higher priority frames have been sent~~ may be
selected after the counter reaches the threshold number.

3. (Canceled)

4. (Currently Amended) A system for transmitting fibre channel frames, comprising:
a fibre channel switch with a transmit port, the transmit port having ~~with~~ at least
25 two priority queues for placing frames with different priorities, where a frame's priority
is based on a hop count depending that is in turn based upon the frame's destination;

a counter associated with each queue, each counter being configured to that keeps
~~track of~~ count frames ~~that are transmitted from the two~~ its associated priority queues
queue; and

30 a credit control module ~~that determines if~~ configured to determine whether
sufficient credit is available before sending a particular frame.

5. (Currently Amended) The system of Claim 4, ~~where a frame's priority is inversely proportional to the frame's hop count~~ wherein frames with higher hop counts have lower priority than frames with lower hop counts.

6. (Currently Amended) A fibre channel switch having a ~~receive and~~ transmit port
5 for transmitting frames, comprising:

at least two priority queues for placing frames with different priorities, where a frame's priority is based on a hop count ~~depending that is in turn based~~ upon the frame's destination;

a counter ~~associated with each queue, each counter being configured to that keeps track of~~ count frames ~~that are~~ transmitted from ~~the two~~ its associated priority queues queue; and

a credit control module ~~that determines~~ configured to determine if sufficient credit is available before sending a particular frame.

7. (Currently Amended) The ~~system~~ fibre channel switch of Claim 6, ~~where a frame's priority is inversely proportional to the frame's hop count~~ wherein frames with higher hop counts have lower priority than frames with lower hop counts.

8. (Currently Amended) A system for transmitting fibre channel frames, comprising:

means for placing ~~a frame~~ frames in a plurality of priority ~~queue~~ queues, where ~~the each~~ priority queue is dedicated to frames having similar priorities;

means for selecting ~~a frame~~ frames for transmission based on ~~the each~~ frame's priority, ~~if credit is available, where a frame with a higher priority is sent before a frame with a lower priority; and~~

~~means for selecting a frame with a lower priority if enough higher priority frames have been sent~~

wherein higher priority frames are selected before lower priority frames until a threshold number of higher priority frames have been selected, after which at least one lower priority frame is selected if lower priority frames are pending.

9. (Currently Amended) The system of Claim 8, further comprising:

means for maintaining a count of frames that are transmitted from ~~[[a]]~~ each priority queue, ~~and the count is used to send~~ wherein lower priority frames ~~if enough~~

~~higher priority frames have been sent~~ may be selected after the means for maintaining a count reaches the threshold number.

10. (Original) The system of Claim 8, where a frame with a higher hop count has lower priority compared to a frame with a lower hop count.

5 11. (Currently Amended) A fibre channel switch having a ~~receive port and a transmit port for transmitting fibre channel frames, comprising:~~

means for placing ~~a frame~~ frames in a plurality of priority queue queues, where ~~the each~~ priority queue is dedicated to frames having similar priorities;

10 means for selecting ~~a frame~~ frames for transmission based on ~~the each~~ frame's priority, ~~if credit is available, where a frame with a higher priority is sent before a frame with a lower priority;~~ and

means for ~~selecting a frame with a lower priority if enough higher priority frames have been sent~~

15 wherein higher priority frames are selected before lower priority frames until a threshold number of higher priority frames have been selected, after which at least one lower priority frame is selected if lower priority frames are pending.

12. (Currently Amended) The switch of Claim 11, further comprising:

20 means for maintaining a count of frames that are transmitted from ~~[[a]] each~~ priority queue, ~~and the count is used to send wherein~~ lower priority frames ~~if enough higher priority frames have been sent~~ may be selected after the means for maintaining a count reaches the threshold number.

13. (Original) The switch of Claim 11, where a frame with a higher hop count has lower priority compared to a frame with a lower hop count.

25 14. (New) The method of Claim 1, further comprising the step of sending the selected frame if sufficient credit is available.

15. (New) The method of Claim 1, further comprising the step of sending the selected lower priority frame if a sum of empty receive buffers at a destination port and receive buffers at the destination port that are filled with higher priority frames is greater than or equal to the hop count for the selected lower priority frame.

30 16. (New) The system of Claim 4, wherein for lower priority frames the credit control module is configured to determine that sufficient credit is available when a sum of empty receive

buffers at a destination port and receive buffers at the destination port that are filled with higher priority frames is greater than or equal to the hop count for the selected lower priority frame.

17. (New) The fibre channel switch of Claim 6, wherein for lower priority frames the credit control module is configured to determine that sufficient credit is available when a sum of
5 empty receive buffers at a destination port and receive buffers at the destination port that are filled with higher priority frames is greater than or equal to the hop count for the selected lower priority frame.

18. (New) The system of Claim 8, further comprising means for determining whether
10 a sum of empty receive buffers at a destination port and receive buffers at the destination port that are filled with higher priority frames is greater than or equal to the hop count for the selected lower priority frame.